

# WATER BATHS **ARGO LAB**

## User manual



***WB 12 / WB 22***

## Sommario

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# 1 Warranty

Thank you for purchasing an ARGO LAB instrument. In normal use conditions, the instrument is guaranteed for a period of 24 months from the date of purchase.

The warranty is valid only if the product is original. It does not apply to any product or parts of it that have been damaged due to incorrect installation, improper connections, improper use, accident or abnormal conditions of operation.

The manufacturer declines all responsibility for damage caused by failure to follow instructions, lack of maintenance and any unauthorized modification.

## 2 Contents of package

The instrument is delivered complete with the following parts:

1. Water bath
2. Stainless steel bottom plate
3. Emptying kit (in case of presence of pump)
4. Power supply cable
5. User manual

## 3 First use

### 3.1 Getting started

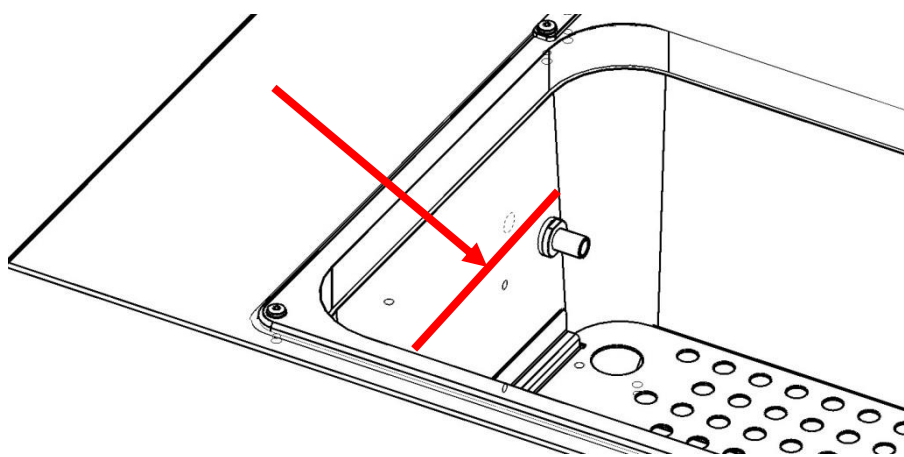
The water bath should be installed in follow conditions:

1. Dry, clean and stable work table with a flat horizontal surface
2. Respect minimum spaces of 20 cm around instrument
3. Room temperature between 5 °C and 40 °C, and relative humidity maximum of 85%
4. Power supply socket with earth connection
5. Power feed between 220-240 V - 50 Hz



### 3.2 Filling of the tank

**Fill the tank with deionized water. The water level must always be above the outlet nozzle of the pump (where present), or in any case in such quantity as to leave uncovered the heating element (see Picture 1).**

**ATTENTION:** during the filling of the tank must always consider the natural evaporation of water. **You must therefore always maintain a sufficient level of water (at least 4-5 cm below the upper edge of the tank), see Picture 1.**



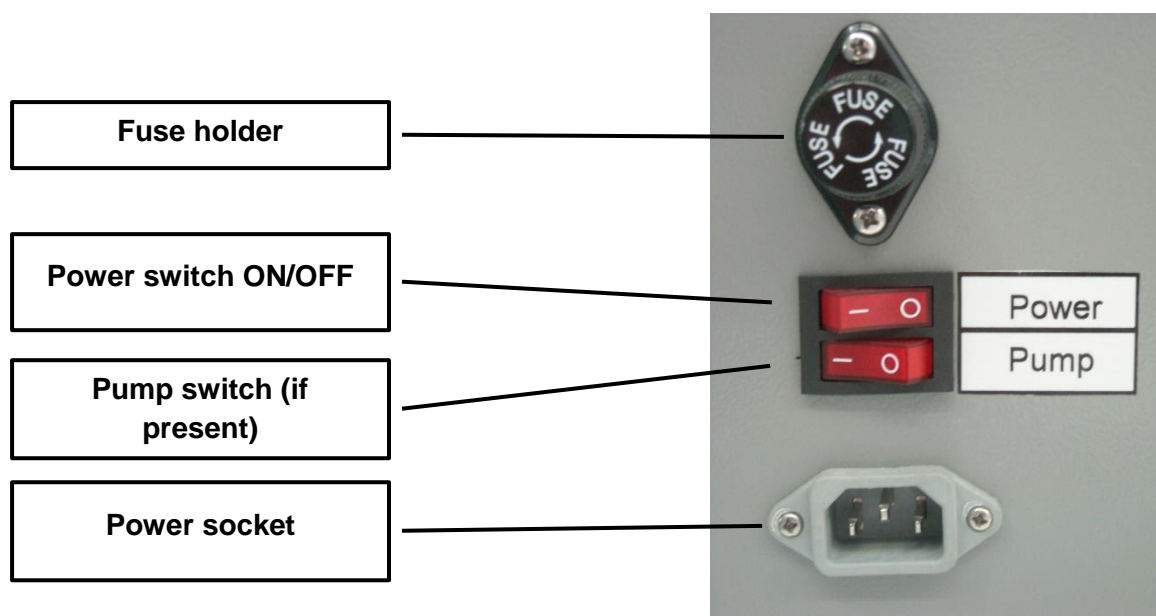
Picture 1

<b>IMPORTANT:</b>	The water bath is designed to be used <b>ONLY</b> with non-flammable liquids
 <b>ATTENTION!</b>	<u>The tank of the water bath should never be filled with a liquid other than water!</u>
 <b>ATTENTION!</b>	<u>Never use the water bath without first put the water inside the bath!</u>

### 3.3 Instrument parts

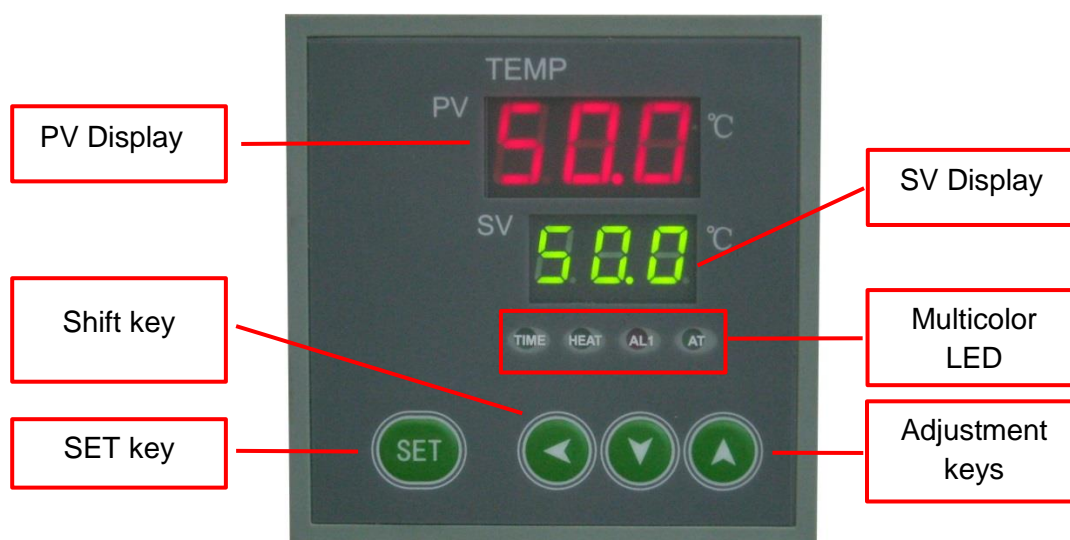


Picture 2 – Front of the water bath



Picture 3 – Rear of the water bath

## 4 Display and commands



*Picture 4 – Display and controller*

<b>DISPLAY / COMMAND</b>	<b>DESCRIPTION</b>
<b>PV Display</b> 	The "PV" display (present value) displays the measured temperature inside the waterbath.
<b>SV Display</b> 	The "SV" display (set value) displays the temperature or set time
	The LEDs indicate, respectively, when the controller is: in timer operating TIMER, heating (HEAT), in overtemperature alarm (AL1), operations (AT).
	The SET button allows you to enter / exit the setup menus of the operating parameters and to confirm them.
	The SHIFT key allows you to quickly change the digit (ones, tens, etc..) of the value of the parameter you are editing.
	Adjustment buttons allow you to increase or decrease the value of the operating parameter being edited.
	The ON / OFF button allows you to turn on and off the instrument
	The ON/OFF "Pump" allows you to turn on and off the circulation pump (if present).

## 5 Operation

### 5.1 Switching on the instrument

**Before turning the power you need to fill it with water (see § Errore. L'origine riferimento non è stata trovata.)**

Connect the power cord to a power supply socket with earth connection.

Turn on the instrument by the ON / OFF main switch located on the rear of the water bath. The button and the main display will light up.

The displays show the initialization sequence and then the instrument is ready for use

**NOTE:** if the set temperature (see display SV) is higher than that detected in the water bath (see display PV), the water bath begins to heat as soon as the initialization phase is finished with the parameters of set temperature and set timer.


### 5.2 Turn on/off of the circulation pump (if present)



If installed, the circulation pump can be switched on or off at any time using the button "Pump" on the back of the water bath. The pump can be operated only if the boiler is switched on, when the "Power" button is in the ON position.


**NOTE:** in the first use or after emptying of the tank of the water bath is possible that the pump has at their internal air bubble and therefore functions "vacuum". If during this stage you hear a sucking sound abnormal aspiration, immediately turn off the pump and bring the water level above the nozzle outlet of the heat pump (see § **Errore. L'origine riferimento non è stata trovata.**).

## 5.3 Setting of parameters

### 5.3.1 Working temperature

When instrument is switched on, pushing once the key (SET) , the display PV shows "SP" (=set point) and the SV display shows the last set value of temperature.



Set the wanted temperature value (Celsius degree) pressing keys  .


Confirm the set value with another press of (SET) .

**NOTE:** It's possible a quick movement between the digits using the key (SHIFT) .

### 5.3.2 Working time

After confirmed the temperature value, the PV display shows "ST" (=set time) and the SV display shows the last set value of time.

Set the wanted temperature value (in minutes) pressing keys  .


Confirm the set value with another press of (SET) .

**NOTE:** It's possible a quick movement between the digits using the key (SHIFT) .



**IMPORTANT:** the value "000" indicates the operation mode "continuous", means that the water bath works until it is turned off with the ON / OFF maintaining the set temperature.

If, however, has been set to a value defined time, for example 30 minutes, the water bath works for 30 minutes.

The count up can be viewed at any time by pressing the key : the PV display will show "TIME" and the SV display will show the time passed from the start of the cycle.

After the set time an intermittent beep and the word "end" on the SV display alerts you to the end of the heating cycle.

Press any button to silence the buzzer.

**NOTE:** when the heating cycle is finished and silenced the buzzer, the water bath doesn't start automatically to heat but it remains in standby phase with "end" script on SV display.

**To resume heating is required, turn off the water bath using the button on the back of "Power".**

At this point the heating cycle start again with the set temperature and set time, or it's possible to set again them and start the working cycle.

## 6 Emptying of the tank



### ATTENZION!

**When you want to empty the tank of the water bath is essential that the heating element is no longer powered and was first cooled down.**

For this reason it is necessary, therefore, before emptying the boiler, always disconnect the electrical resistance in this way:

<b>WATERB BATH WB 12 / WATER BATH WB 22 (without pump)</b>	<b>WATER BATH WB 22 Pump (with pump)</b>
<ul style="list-style-type: none"> <li>- Turn off the water bath through the "Power" button on the back</li> </ul>	<ul style="list-style-type: none"> <li>- Set a working temperature lower than room temperature</li> <li>- Switch off the pump through the button "Pump" on the rear of the instrument</li> <li>- Turn off the water bath through the "Power" button on the back</li> </ul>



### ATTENZION!

**Before proceeding with the removal of water wait until it has sufficiently cooled!!!**

Once cooled, it's possible to emptying with help of a tank and / or absorbent cloth or paper.

For the instruments with circulation pump, it's possible to proceed as indicated at § 6.1 .

### 6.1 Use of the emptying kit (if present pump)

If the instrument is equipped with circulation pump is able to use for the emptying of the water bath together with a kit of emptying rubber provided with the instrument

The water bath can be emptied using the above kit as follows:



1. Turn off the heating element by setting of the working temperature lower than the room temperature (see § **Errore. L'origine riferimento non è stata trovata.**);
2. Turn off the circulation pump by the switch "Pump" (vedi § **Errore. L'origine riferimento non è stata trovata.**);
3. Switch off the water bath by the button "Power" (vedi § **Errore. L'origine riferimento non è stata trovata.**);
4. **Wait for the cooling of the water;**
5. Using to the special double cone white, connect the short tube to the suction nozzle of the pump at the bottom of the tank (see picture 5);
6. Connect the long tube to the output nozzle in the top of the tank (see picture 5). Put the other terminal of the tube in a recipient of a sufficient capacity;
7. Switch on the water bath by the "Power" button and **verify that the heating element isn't heating: the "HEAT" LED must be off !**
8. Switch off the pump through the button ON/OFF "Pump" to start the emptying: in this way the pump transfer the water from the tank into the external recipient;
9. Using the shorter tube take away the remaining water on the bottom of the tank and once the pump start to work at vacuum switch it off immediately;
10. If necessary remove the last traces of water with an absorbent cloth or paper.


**ATTENZION!**

**The pump musn't be use at vacuum, but only for the circulation of water, because it is designed to pump liquids and not air.**



**Picture 5 – Emptying kit for water bath with pump**

## 7 Clean and maintenance

Proper maintenance and cleaning of the instrument guarantee its good conditions.

The tank of the instrument is made of stainless steel, so it can be cleaned with any detergent provided it is not aggressive and / or corrosive.

You should clean the inside and outside surfaces with a standard all-purpose cleaner sprayed on a soft cloth.

Before proceeding with any cleaning or decontamination, the user must ensure that the method used does not damage the instrument.



**ATTENZIONE!**

**In case of use of absorbent paper, take particular care to avoid that traces of it remain inside the tank.**

**Eventually pieces of paper can gravely damage the pump.**

**IMPORTANT:** if the instrument must be returned for service, it is necessary to provide for proper cleaning and possible decontamination by pathogens of the same.

It is also recommended to put the instrument in its original packaging to send it in for repairs.

## 8 Disposal of electronic equipment



The electrical and electronic equipment marked with this symbol may not be disposed of in landfills.

In accordance with EU Directive 2002/96/EC, the European users of electrical and electronic equipment have the opportunity to give back to the distributor or manufacturer upon purchase of a new one.

The illegal disposal of electrical and electronic equipment is punished with an administrative fine.